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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DAVIS, ZACHARY A

ART UNIT	PAPER NUMBER
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2137

MAIL DATE	DELIVERY MODE
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10/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/867,049	NYMAN ET AL.	
	Examiner	Art Unit	
	Zachary A. Davis	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 25-31, 35 and 37-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 25-31, 35 and 37-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. A response was received on 17 August 2007. By this response, Claims 1, 4, 6, 7, 13, 25, 28, 30, 35, 37, 38, 44, 50, and 53 have been amended. New Claims 55 and 56 have been added. No claims have been canceled. Claims 1-14, 25-31, 35, and 37-54 are currently pending in the present application.

Response to Arguments

2. Applicant's arguments filed 17 August 2007 have been fully considered but they are not persuasive.

Claims 1-10, 13, 14, 25-31, 35, 37-47, and 50-56 were rejected under 35 U.S.C. 103(a) as unpatentable over Berggren, WIPO Publication WO00/44130, in view of Turtiainen, US Patent 6430407, and Bilgic et al, US Patent 6097817. Claims 11, 12, 48, and 49 were rejected under 35 U.S.C. 103(a) as unpatentable over Berggren in view of Turtiainen and Bilgic, and further in view of Lightman et al, US Patent 6711414.

In reference to the independent Claims, and with specific reference to independent Claim 1, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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Specifically, Applicant argues that Berggren does not disclose receiving at the client the subscriber identity sent from the mobile station (pages 12-13 of the present response, alleging that page 13, lines 17-20, of Berggren, as cited, and other portions of Berggren do not show the claimed limitation). However, the Examiner notes that at least the cited portion of Berggren does disclose receiving at the client the subscriber identity sent from the mobile station, as claimed (see Berggren, page 16, lines 23-26, as cited, where the registration request sent from the terminal 262, which corresponds to the claimed client, includes subscriber information that is read from SIM card 160, noting that the SIM card includes the subscriber identity and is a part of the mobile station, and therefore, the subscriber identity must be received from the mobile station at the client/terminal before it is sent in the request as described in the cited portion).

Applicant further argues that Turtiainen does not disclose receiving the subscriber identity at a mobile client from a mobile station (page 13 of the present response); however, because this limitation is disclosed by at least the cited portions of Berggren, this argument is moot. Applicant also argues that Turtiainen does not teach or suggest the first secret and second secret as claimed (see pages 13-14 of the present response). However, Turtiainen was not relied upon to show at least the use of the second secret; rather, Bilgic was relied upon for a teaching of this limitation.

Additionally, Applicant argues that Bilgic does not teach or suggest receiving a subscriber identity at a mobile client from a mobile station (page 14 of the present response). Again, the Examiner notes that this is moot, because this limitation is disclosed by at least the cited portions of Berggren, as noted above.

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Applicant further argues that one of ordinary skill in the art at the time the invention was made would not have been motivated "to modify the references so that the subscriber identity is provided from the mobile station instead of the communication network(s)" (page 14 of the present response). However, this modification would not be necessary, since the cited limitation (receiving the subscriber identity at the client from the mobile station) is taught by at least the cited portions of Berggren, as noted above, so this argument is moot. In further response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation to include the features of Turtiainen was as cited in the previous Office action, namely to free a user from the need to carry a separate authentication device or many different authentication devices (see column 5, lines 20-42), and motivation to include the features of Bilgic was also as cited in the previous Office action, namely to further provide authentication and security in a mobile or wireless communication system (see Bilgic, column 4, lines 60-63).

Therefore, for the reasons detailed above, the Examiner maintains the rejections as set forth below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10, 13, 14, 25-31, 35, 37-47, and 50-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berggren, WIPO Publication WO00/44130, in view of Turtiainen, US Patent 6430407, and Bilgic et al, US Patent 6097817.

In reference to Claim 1, Berggren discloses a method for authenticating including receiving a subscriber identity at a client from a mobile station (page 13, lines 17-20; page 16, lines 23-27), sending the identity from the client to an authentication block of a network (page 13, lines 20-23; page 16, lines 15-31), receiving at the client a first secret and a challenge from the authentication block (page 12, line 35-page 13, line 12; page 16, lines 38-32), sending the challenge to a subscriber identity module, receiving a response to the challenge at the client, and authenticating the client (page 13, lines 17-32; page 17, lines 7-22). However, Berggren does not explicitly disclose that the client is mobile.

Turtiainen discloses a method for authenticating a mobile client to a communication system including receiving a subscriber identity from a mobile station (column 9, lines 29-37 and 45-49) where a mobile telecommunication network is separate from the communication system to which the mobile client is being

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authenticated (column 8, lines 1-7), sending the subscriber identity, receiving a challenge and a secret, and using a response to the challenge and the secret to authenticate the client (column 10, lines 22-39). Turtiainen further discloses the mobile client and mobile station communicating directly (column 10, lines 51-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Berggren to include the features taught by Turtiainen, in order to free a user from the need to carry a separate authentication device or many different authentication devices (see column 5, lines 20-42).

Although Berggren and Turtiainen disclose a challenge response protocol for authenticating the user (Turtiainen, column 10, lines 22-39), neither Berggren nor Turtiainen explicitly discloses a second secret being used as the response to the challenge, the second secret being used to authenticate the client. Bilgic discloses an authentication protocol to be used in a wireless network (see column 1, lines 7-10; see also column 30, lines 32-53), where subscriber information and a first secret are stored in a subscriber identity module in a mobile station (column 30, lines 38-43), and where a challenge is provided to the mobile station and the mobile station provides a second secret in response to the challenge and the second secret is used for authenticating (column 30, line 54-column 31, line 5; column 31, lines 32-48; Figure 18, where the challenge is the random number RAND and the second secret is the signed response SRES). Therefore, it would have been obvious to one of ordinary skill in the art to modify the method of Berggren and Turtiainen by including the specific challenge response protocol disclosed by Bilgic, in order to further provide authentication and

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security in a mobile or wireless communication system (see Bilgic, column 4, lines 60-63).

In reference to Claims 2, 3, and 8, Berggren, Turtiainen, and Bilgic further disclose receiving a personal identification number or PIN (see Turtiainen, column 10, lines 26-30; Berggren, page 12, lines 12-17, and page 12, line 35-page 13, line 12) and encrypting the PIN (Turtiainen, column 9, line 66-column 10, line 9).

In reference to Claims 4 and 5, Berggren, Turtiainen, and Bilgic further disclose encrypting and transmitting the response (see Turtiainen, column 10, lines 6-9).

In reference to Claims 6 and 7, Berggren, Turtiainen, and Bilgic further disclose that the transmissions and receptions are performed wirelessly (Turtiainen, column 6, lines 18-25).

In reference to Claims 9 and 10, Berggren, Turtiainen, and Bilgic further disclose that the wireless transmissions can use an infrared signal or a radio signal (Turtiainen, column 10, lines 51-55).

In reference to Claim 55, Berggren, Turtiainen, and Bilgic further disclose sending the subscriber identity from the mobile client to the authentication block via the communication system (page 13, lines 20-23; page 16, lines 15-31).

In reference to Claim 25, Berggren discloses a method including retrieving a subscriber identity from a subscriber identity module in a mobile station (page 13, lines 17-20; page 16, lines 23-27), wirelessly sending the subscriber identity from the mobile station to a client for authentication (page 13, lines 17-20; page 16, lines 23-27),

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wirelessly receiving at the mobile station a challenge from the client (page 12, line 35- page 13, line 12; page 16, lines 38-32), generating a response to the challenge at the mobile station, and wirelessly sending the response from the mobile station to the client (page 13, lines 17-32; page 17, lines 7-22). However, Berggren does not explicitly disclose that the client is mobile.

Turtiainen discloses a method including retrieving and sending a subscriber identity (column 9, lines 29-37 and 45-49), receiving a challenge, and generating and sending a secret in response to the challenge (column 10, lines 22-39). Turtiainen further discloses the mobile client and mobile station communicating directly (column 10, lines 51-56) but that a mobile telecommunication network is distinct from the communication system to which the mobile client is being authenticated (column 8, lines 1-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Berggren to include the features taught by Turtiainen, in order to free a user from the need to carry a separate authentication device or many different authentication devices (see column 5, lines 20-42).

Although Berggren and Turtiainen disclose a challenge response protocol for authenticating the user (Turtiainen, column 10, lines 22-39), neither Berggren nor Turtiainen explicitly discloses a secret being used as the response to the challenge, the secret being used to authenticate the client. Bilgic discloses an authentication protocol to be used in a wireless network (see column 1, lines 7-10; see also column 30, lines 32-53), where subscriber information is stored in a subscriber identity module in a mobile station (column 30, lines 38-43), and where a challenge is provided to the mobile

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station and the mobile station provides a secret in response to the challenge and the secret is used for authenticating (column 30, line 54-column 31, line 5; column 31, lines 32-48; Figure 18, where the challenge is the random number RAND and the secret is the signed response SRES). Therefore, it would have been obvious to one of ordinary skill in the art to modify the method of Berggren and Turtiainen by including the specific challenge response protocol disclosed by Bilgic, in order to further provide authentication and security in a mobile or wireless communication system (see Bilgic, column 4, lines 60-63).

In reference to Claims 26, 27, 28, and 29, Berggren, Turtiainen, and Bilgic further disclose receiving a request containing an encrypted PIN and confirming the PIN (see Turtiainen, column 9, line 66-column 10, line 9; and column 10, lines 22-39).

Claims 13, 14, 30, and 31 are apparatus claims corresponding substantially to the methods of Claims 1, 2, 25, and 26, respectively, and are rejected by a similar rationale.

Claim 35 is directed to software implementations of the method of Claim 7, and is rejected by a similar rationale. Similarly, Claim 37 is directed to a software implementation of the method of Claim 25, and is rejected by a similar rationale.

Claims 38-47, 50-54, and 56 are apparatus claims corresponding substantially to the methods of Claims 1-10, 25-29, and 55, respectively, and are rejected by a similar rationale. Claims 38, 39, 50, and 51 also correspond substantially to the apparatus of Claims 13, 14, 30, and 31, respectively.

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5. Claims 11, 12, 48, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berggren in view of Turtiainen and Bilgic as applied to claims 8 and 45 above, and further in view of Lightman et al, US Patent 6711414.

In reference to Claims 11 and 12, Berggren as modified above discloses everything as applied to Claim 8 above. Berggren, Turtiainen, and Bilgic also disclose that the wireless transmissions can have any "suitable operational connection" (see Turtiainen, column 10, lines 53-54); however, none of Berggren, Turtiainen, and Bilgic explicitly discloses the use of a low power radio signal or an acoustic signal for the wireless transmissions.

Lightman discloses a wireless communication apparatus that can transmit wireless signals using an infrared signal, a Bluetooth (low power radio) signal, a radio frequency signal, or an acoustic signal (column 6, lines 36-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method of Berggren as modified above to use a low power radio signal or acoustic signal for the wireless transmissions, in order to allow the wireless communication devices to easily transmit to and receive from other devices, and to allow the wireless devices to interact with other devices and their surroundings (see Lightman, column 3, lines 19-28).

Claims 48 and 49 are apparatus claims corresponding substantially to the methods of Claims 11 and 12, and are rejected by a similar rationale.

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Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A. Davis whose telephone number is (571) 272-3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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